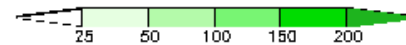
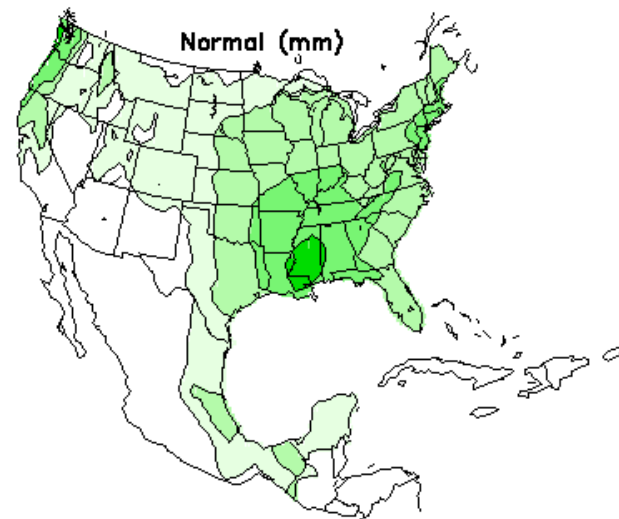
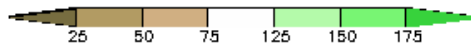
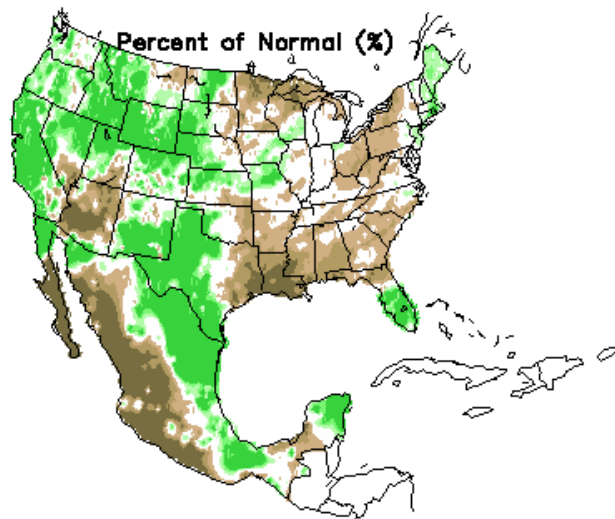
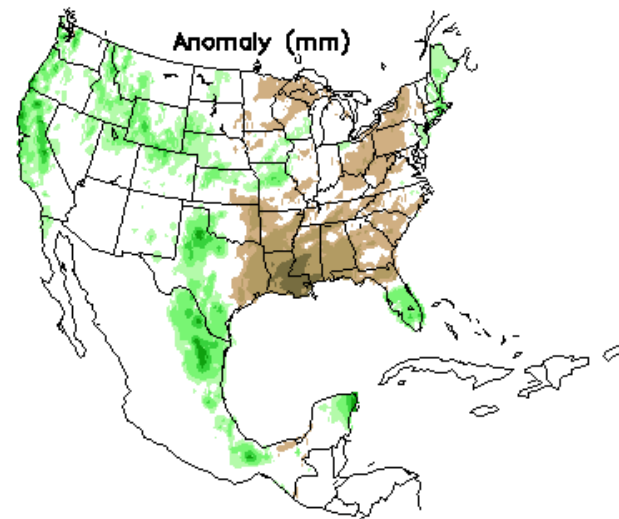
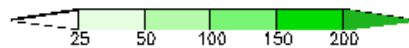
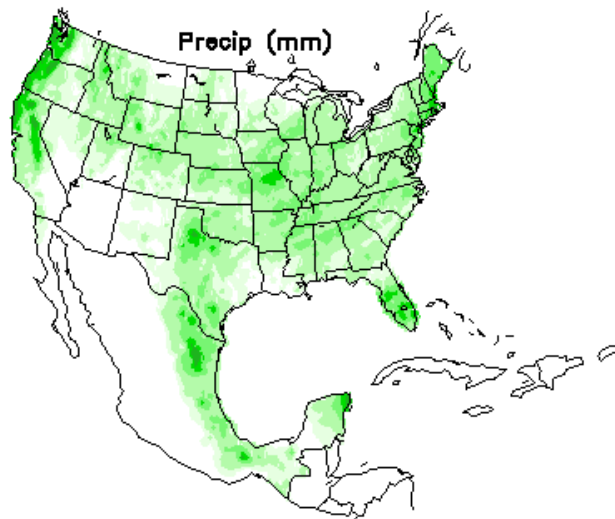


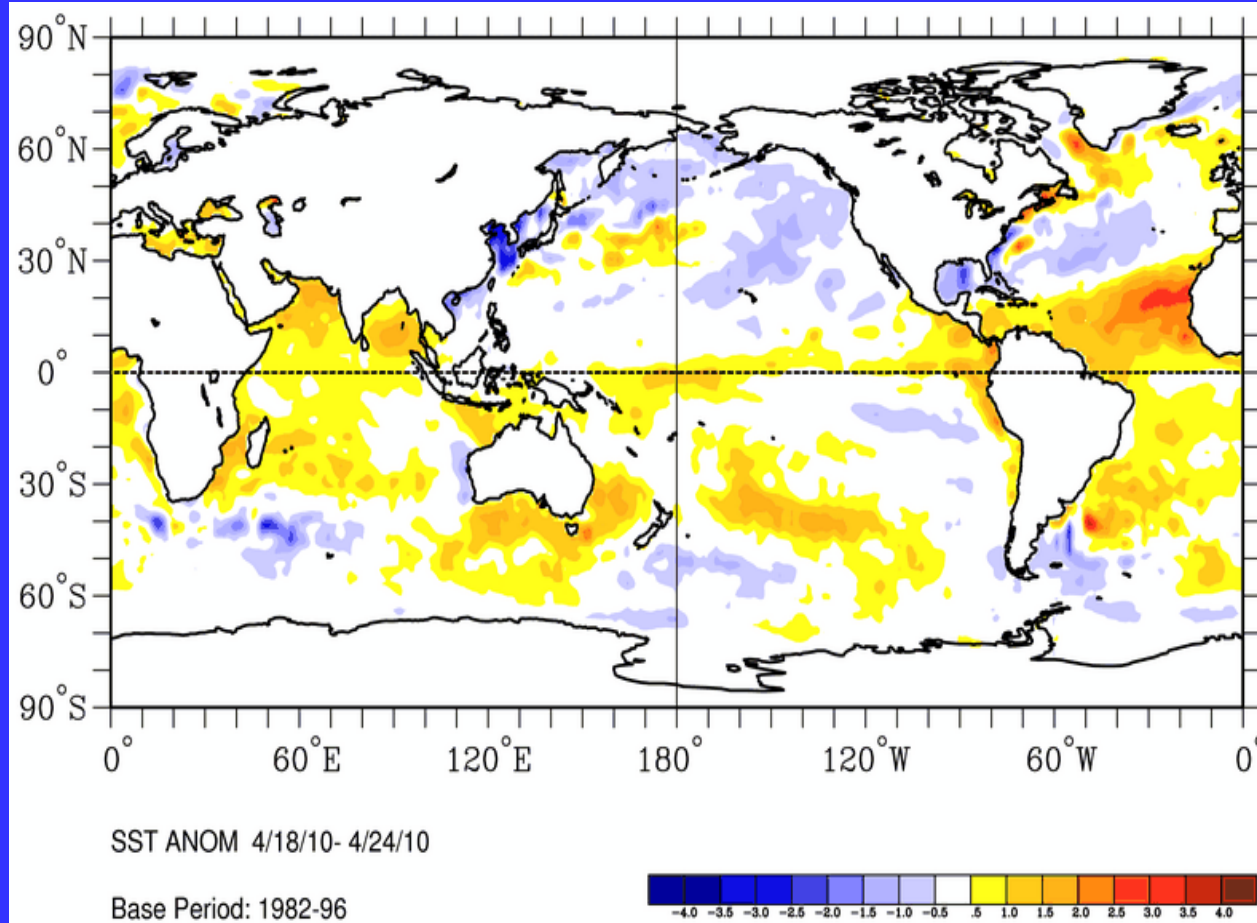
Weekly Climate Update April 27th 2010

- While the recent evolution of equatorial Pacific atmospheric and oceanic variables suggest that El Nino conditions are weakening, the wetter than normal rainfall pattern has continued to persist in south Florida. This late wetness has been unusual even for an El Nino dry season. In addition, the unusually cold winter and early spring has slowed plant growth and lowered direct evaporation from water bodies significantly reducing evapotranspiration and adding to the runoff.
- In the most recent official CPC seasonal climate outlook made April 15th there is only one climate window with a shift in the climate regime predicted to vary from climatology (towards wet or dry). In the March CPC Outlook there were several windows shifted towards increased chances of above normal rainfall.
- The potential for an active tropical season is currently in place. The North Tropical Atlantic SSTs are near or at record warmth and updates of the CFS predictions are continually hedging more towards neutral and possibly La Nina conditions for later this summer. The evolution of these systems will need to be continually monitored in the upcoming months. Atmospheric and ocean conditions this year have similar characteristics as those of 1969

30-day accumulation ending 20100426



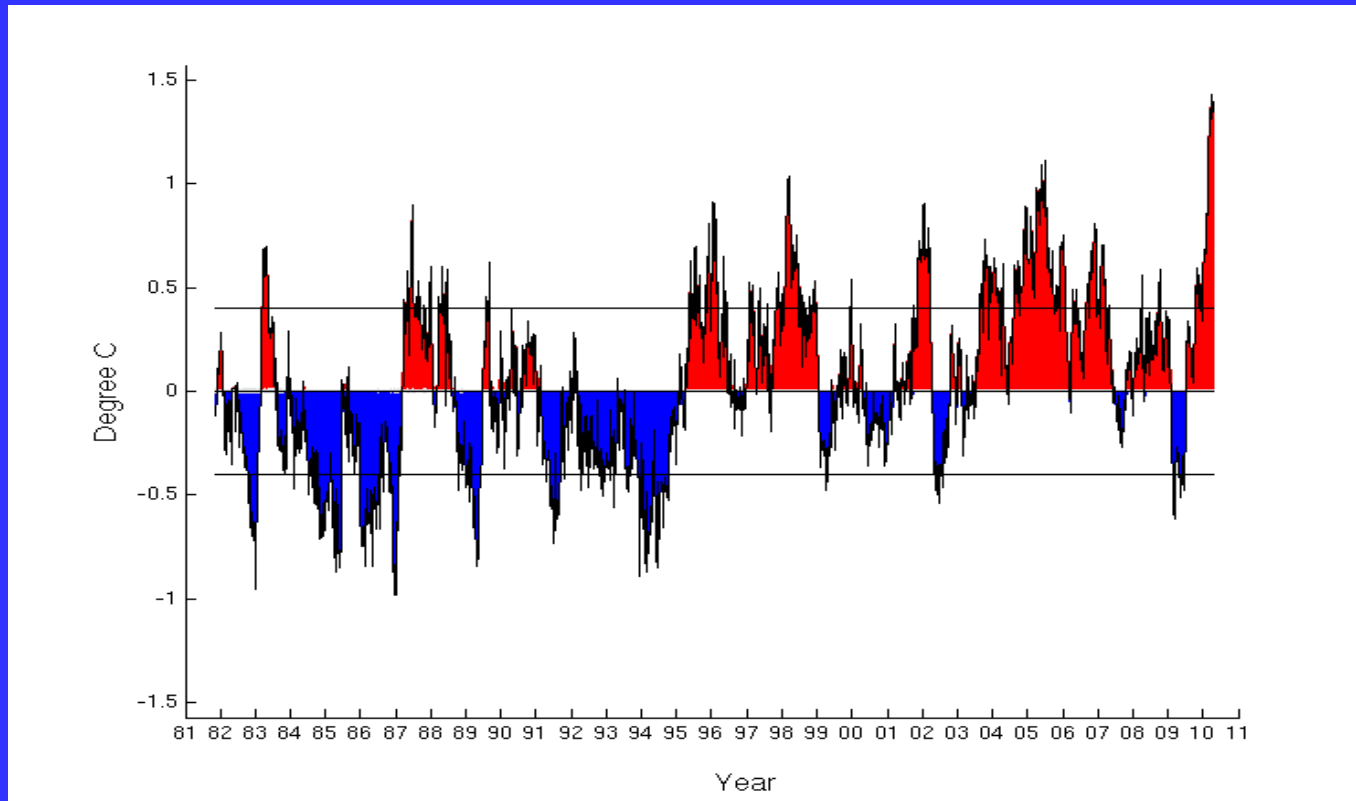
Latest Weekly Global Sea Surface Temperature Anomaly



Very Warm
Temperatures
in
the
Main
Development
Region
of Atlantic
Hurricanes
[5N-20N].
is very similar
to 1969.

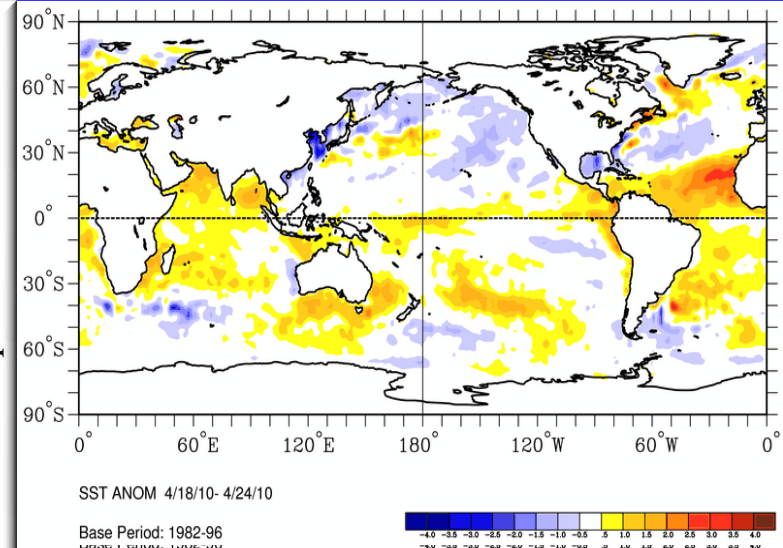
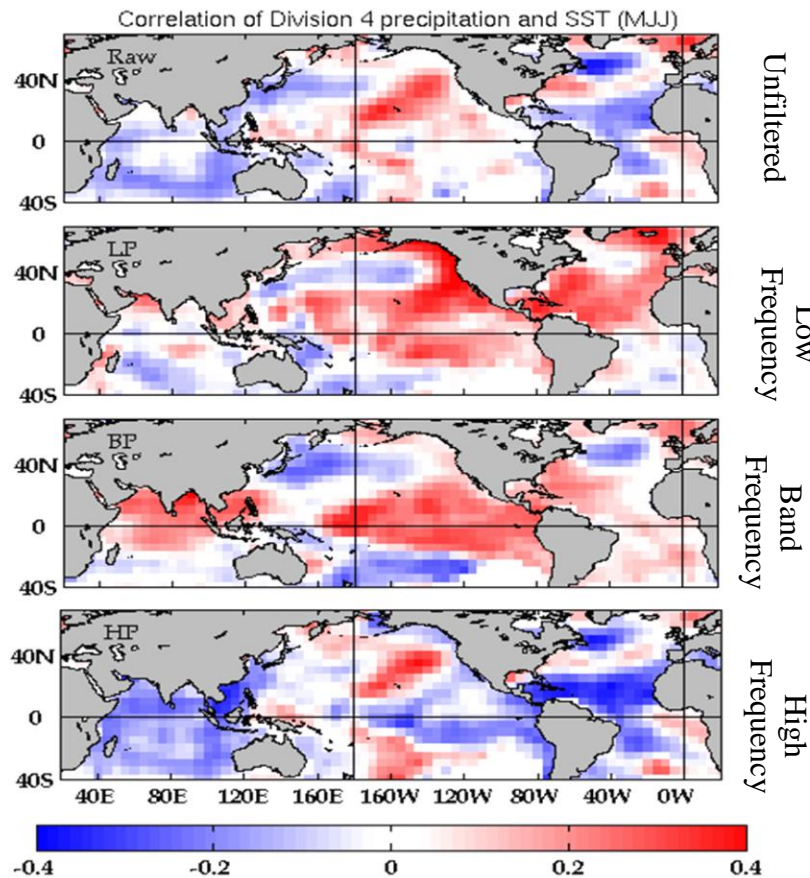
The warm water in the north tropical Atlantic, if it persists, creates a climatologic conditions that favors less rainfall in Florida during May through July climate window but a more active tropical season overall.

Tropical Northern Atlantic Index (TNA)



The TNA SST anomaly index is an indicator of the surface temperatures in the eastern tropical North Atlantic Ocean. It is calculated with SSTs in the box 55°W - 15°W, 5°N - 25°N.

Correlation south Florida RF with global SSTA for the May-July Season.



Compare unfiltered correlation map (top left) to the sea surface temperature anomaly map (top right) right. Positive SSTA in regions with negative correlation are regions that favor lower rainfall in central Florida. Likewise negative SSTA where there is positive correlation also indicates regions that support a decrease chance of RF. Much of the global ocean currently favors a tendency toward lower RF in central Florida for the May thru July climate window. High frequency variability in the eastern tropical Pacific tends dominate out the positive El Nino effect on Florida RF for this climate window. High frequency variability likewise dominates low frequency variability such as AMO in the Atlantic .

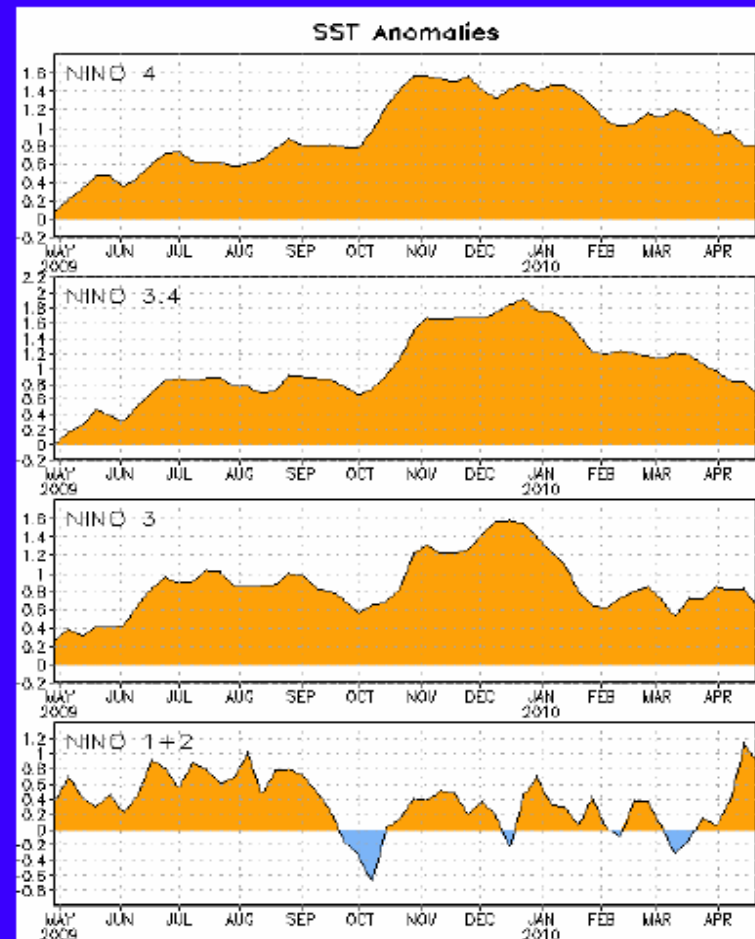
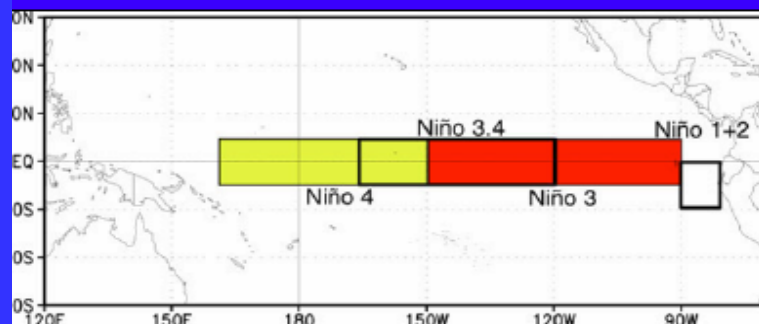
The figure on the left illustrates correlation of south Florida rainfall to global sea surface temperature anomalies (SSTA) for: A. Unfiltered, B. decadal variability (AMO, PDO...), C. interannual variability (ENSO, AO, NAO....), D. Intra seasonal Variability.



Niño Region SST Departures (°C) Recent Evolution

The latest weekly SST departures are:

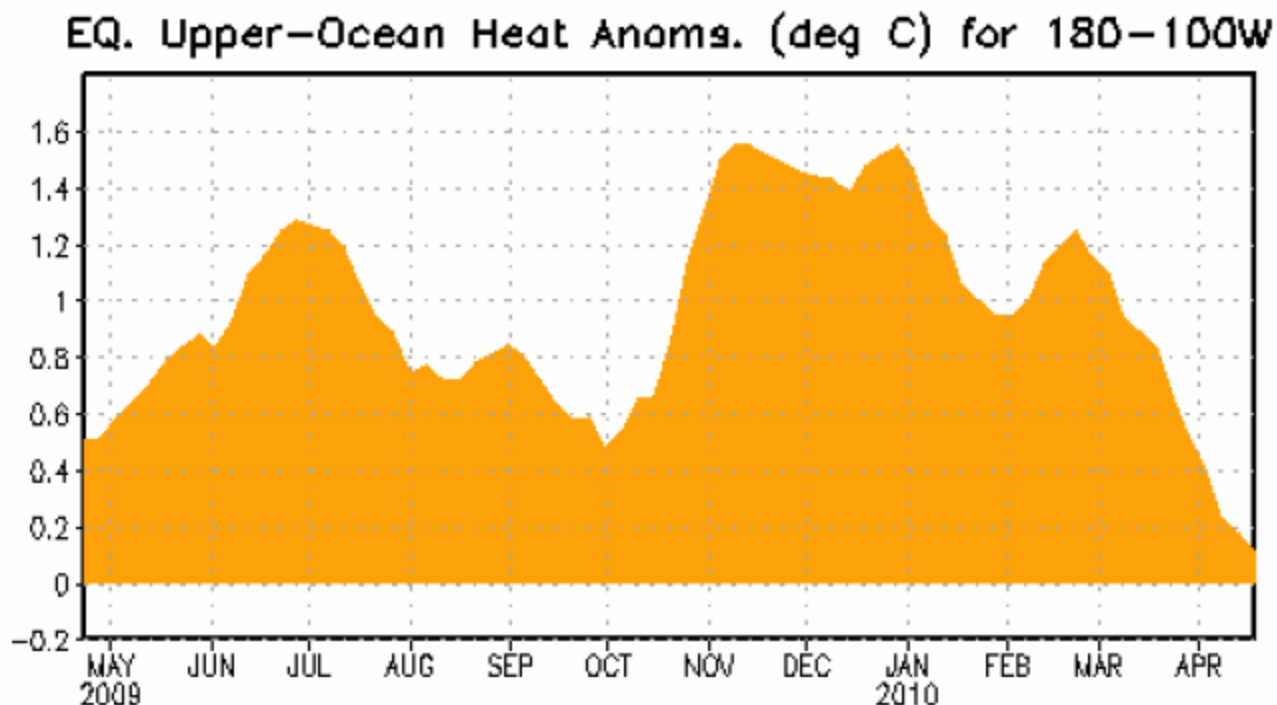
Niño 4	0.8°C
Niño 3.4	0.7°C
Niño 3	0.6°C
Niño 1+2	0.9°C



A decline in the Niño temperature anomalies from strong to moderate strength occurred during the period from January through March. In the most recent weeks El Niño has continued to decrease in strength and now is classified as weak.



Central & Eastern Pacific Upper-Ocean (0-300 m) Weekly Heat Content Anomalies

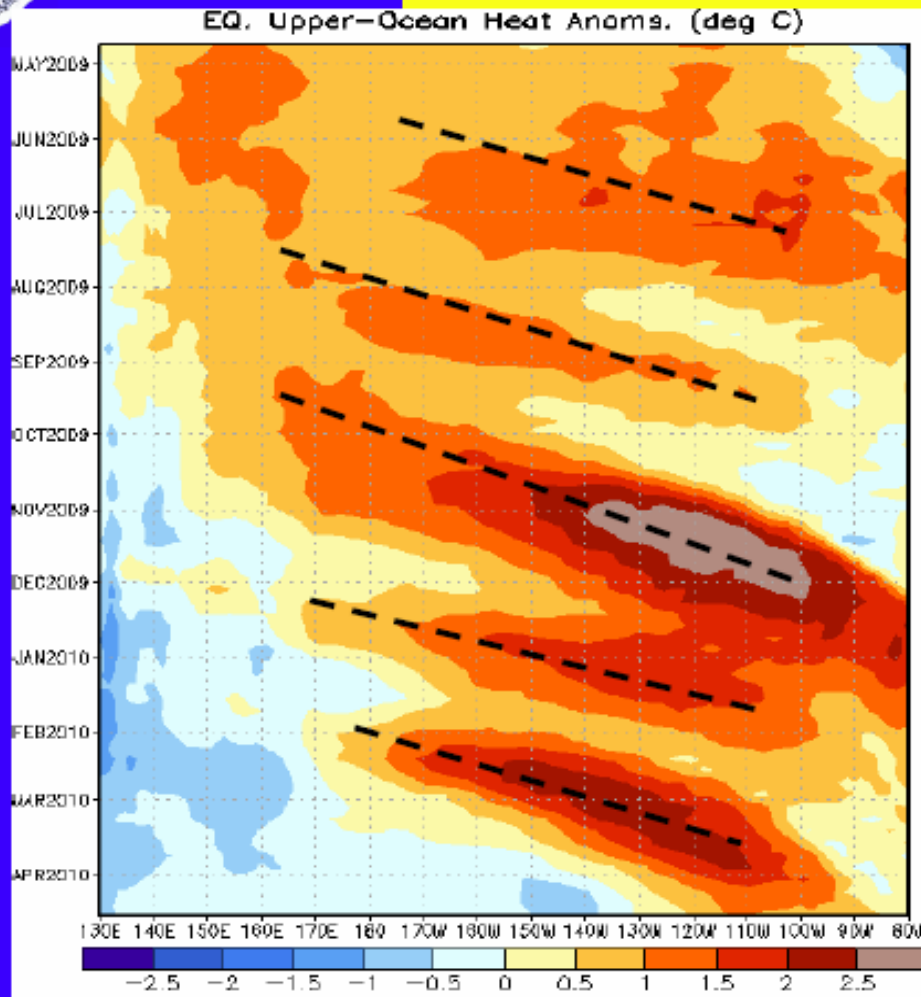


Since April 2009, the upper-ocean heat content has been above average across the eastern half of the equatorial Pacific Ocean. Sharp increases in heat content during June and October 2009 coincide with the development and subsequent strengthening of El Niño, respectively. Since late February 2010, the heat content anomalies have decreased.



Weekly Heat Content Evolution in the Equatorial Pacific

Time



Longitude

In April 2009, the combined effects of an oceanic Kelvin wave and weaker easterly trade winds contributed to an increase in the upper-ocean heat content anomalies across the Pacific Ocean.

Since April 2009, heat content anomalies have remained above-average.

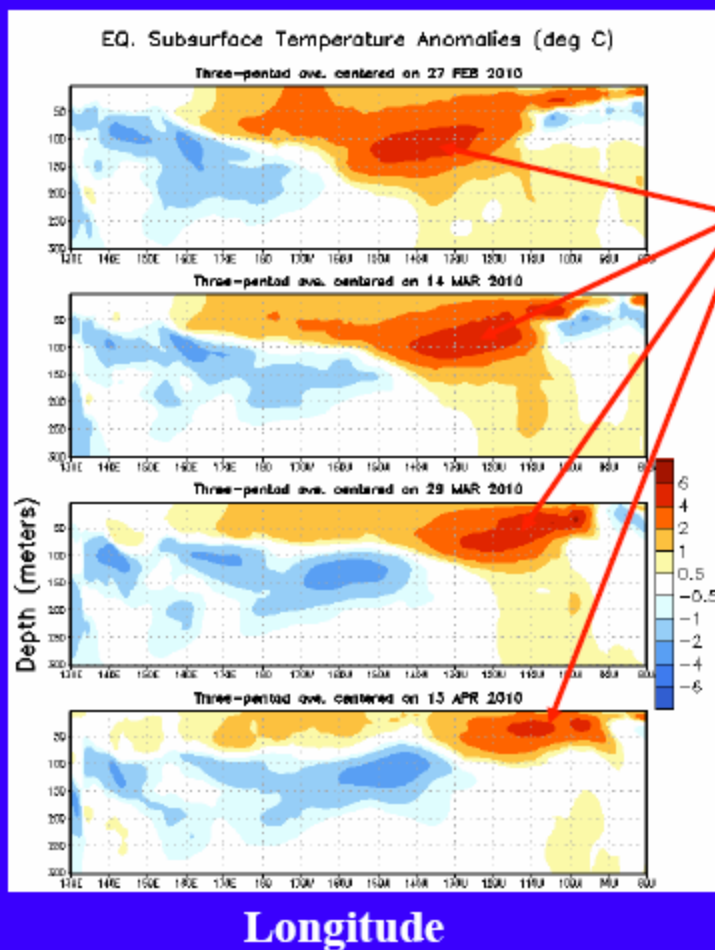
Multiple Kelvin waves shifted eastward between August and March 2010 (last four dashed black lines).

Heat content anomalies have decreased in the central and east-central Pacific in association with the upwelling phase of a Kelvin wave. Some below-average anomalies are now present as far east as 130W.

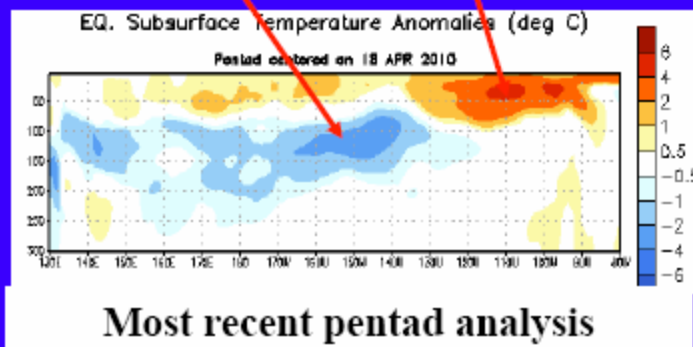


Sub-Surface Temperature Departures (°C) in the Equatorial Pacific

Time



- Since late February 2010, positive subsurface temperature anomalies increased and shifted eastward in association with the downwelling phase of an oceanic Kelvin wave
- Recently, above-average temperatures have persisted in the eastern equatorial Pacific Ocean. The upwelling phase of the Kelvin wave has contributed to below-average temperatures at depth in the central and east-central Pacific.



Most recent pentad analysis

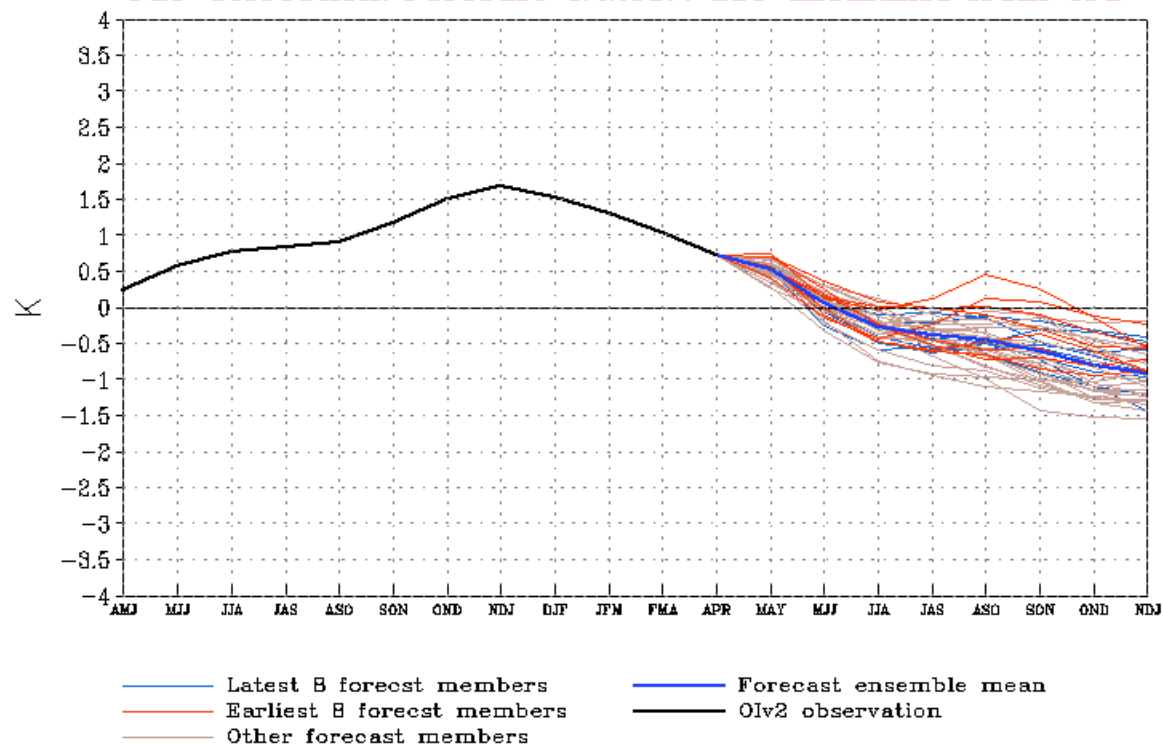
Climate Forecast System Experimental Predictions



NWS/NCEP

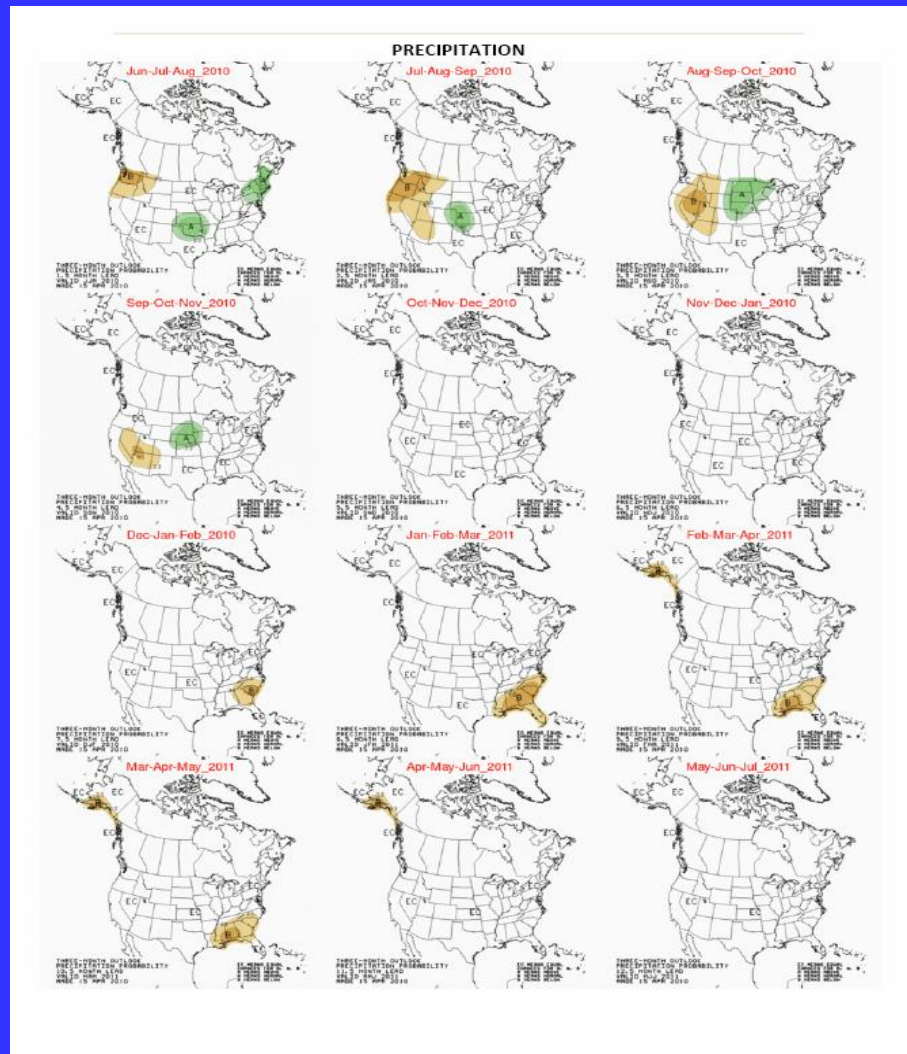
Last update: Tue Apr 27 2010
Initial conditions: 16Apr2010–25Apr2010

PDF correction: Forecast *Nino3.4* SST anomalies from CFS



Three Month Overlapping Seasonal Outlook

Climate Prediction Center



Seasonal Climate Outlook Versus Observed

Oct-Nov-Dec

Nov-Dec-Jan

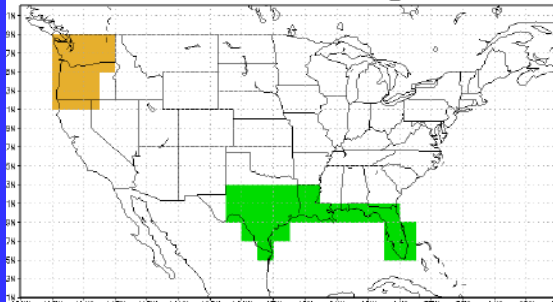
Jan-Feb-Mar

Precipitation (Forecast)
Download Forecast Data Archive
([CAT](#), [PROB ABOVE](#) [PROB BELOW](#))
[How To Read Precipitation Forecasts](#)

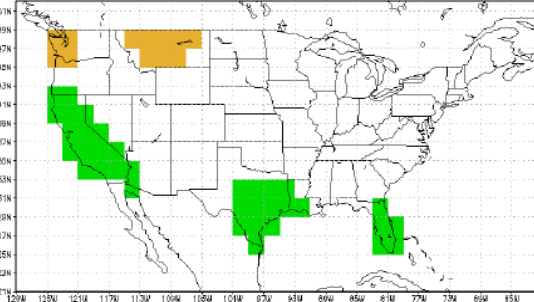
Precipitation (Forecast)
Download Forecast Data Archive
([CAT](#), [PROB ABOVE](#) [PROB BELOW](#))
[How To Read Precipitation Forecasts](#)

Precipitation (Forecast)
Download Forecast Data Archive
([CAT](#), [PROB ABOVE](#) [PROB BELOW](#))
[How To Read Precipitation Forecasts](#)

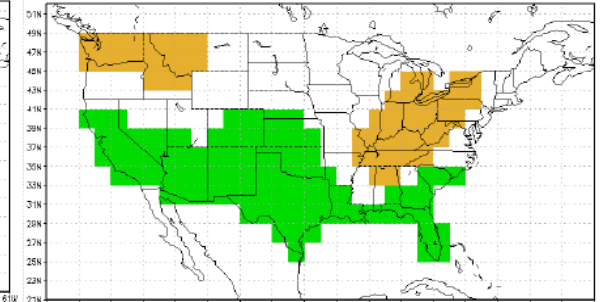
Oct-Nov-Dec 2009 Prec Official_Forecast



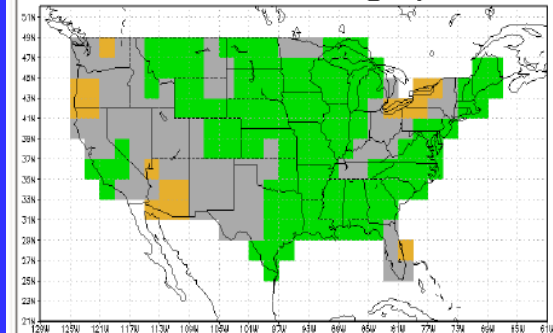
Nov-Dec-Jan 2009-10 Prec Official_Forecast



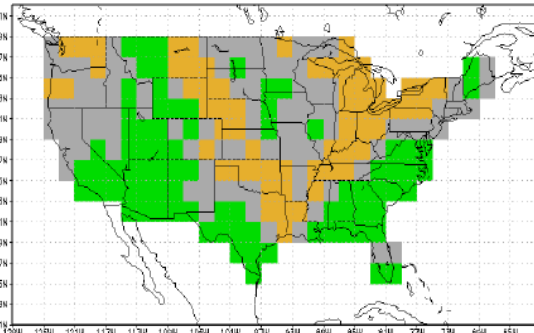
Jan-Feb-Mar 2010 Prec Official_Forecast



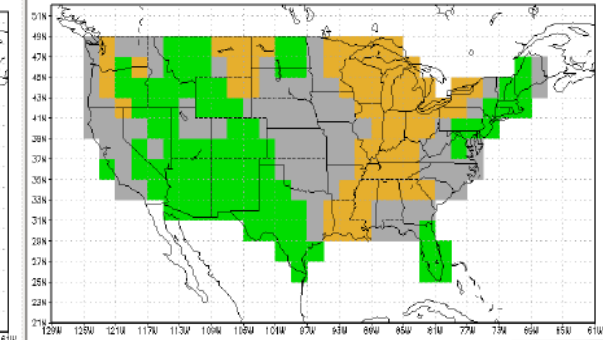
Oct-Nov-Dec 2009 Prec Obs_Categories



Nov-Dec-Jan 2009-10 Prec Obs_Categories



Jan-Feb-Mar 2010 Prec Obs_Categories

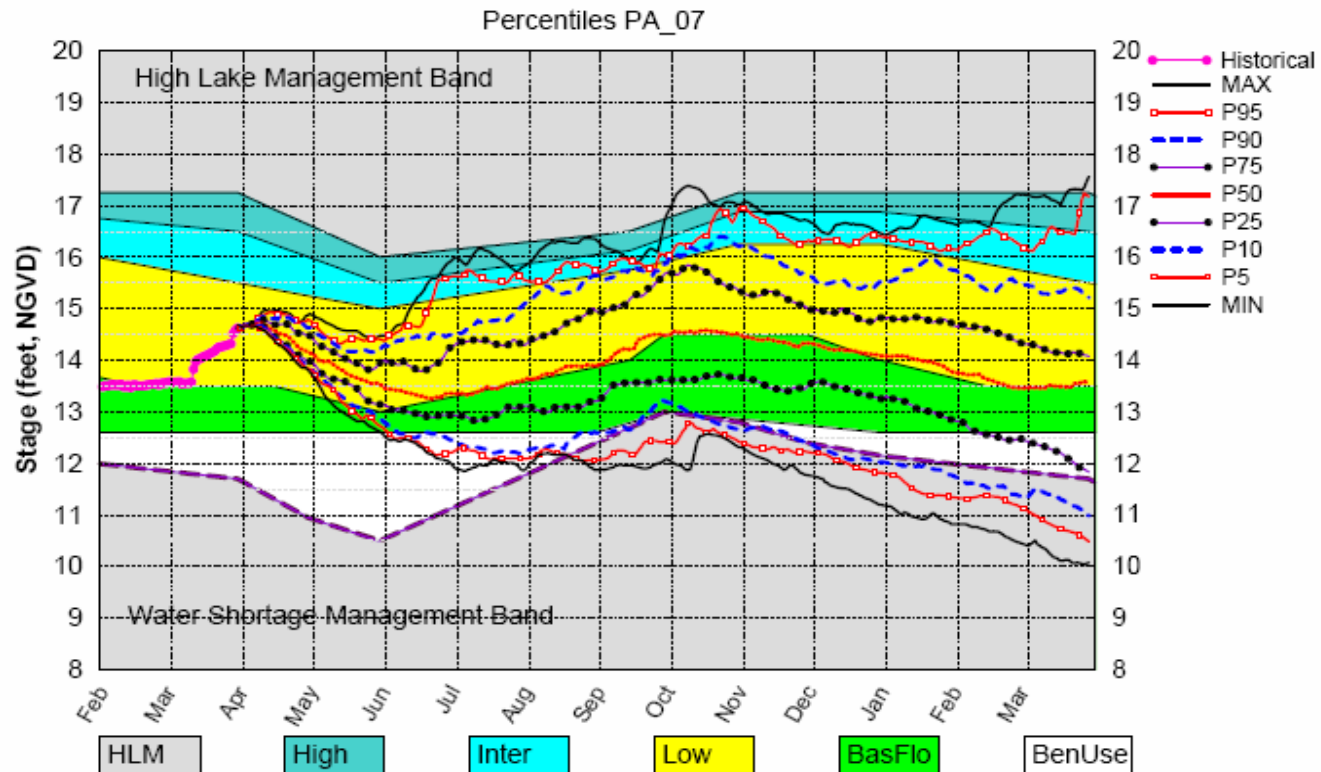


Predicted

Observed

Position Analysis (PA) Percentiles

Lake Okeechobee SFWMM April 2010 Position Analysis



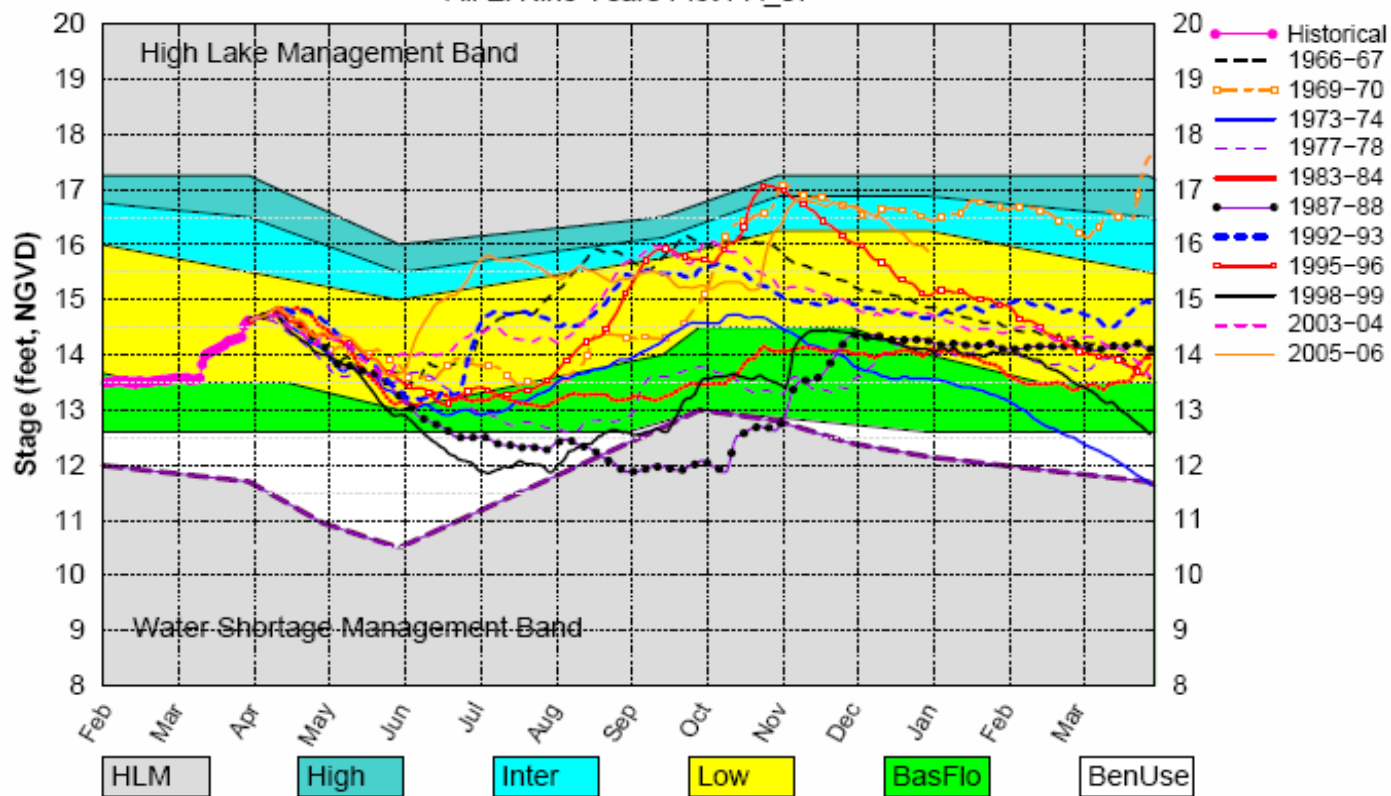
(See assumptions on the Position Analysis Results website)

Thu Apr 8 15:34:47 2010

Position Analysis (PA) for El Nino years

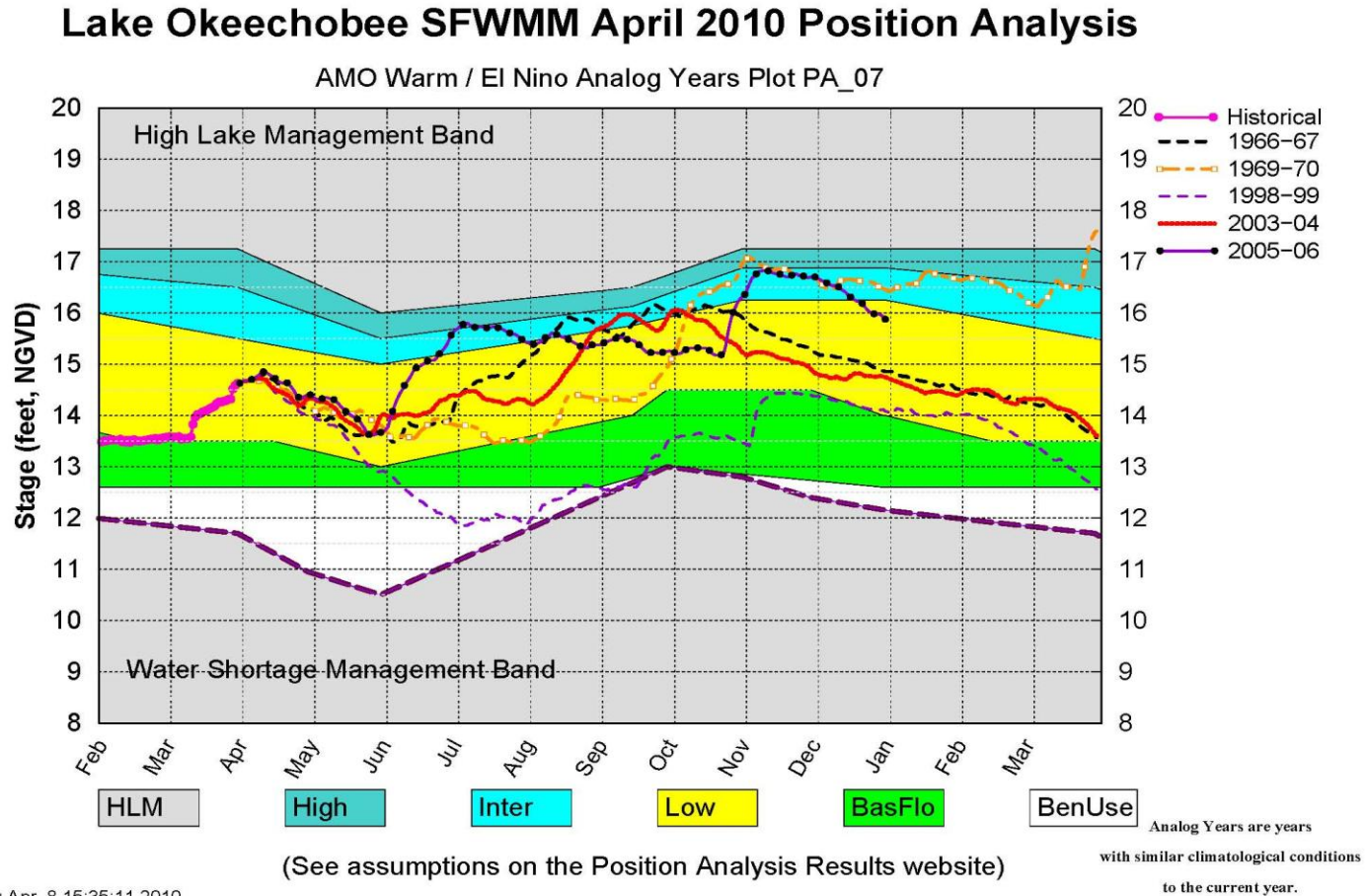
Lake Okeechobee SFWMM April 2010 Position Analysis

All El Nino Years Plot PA_07



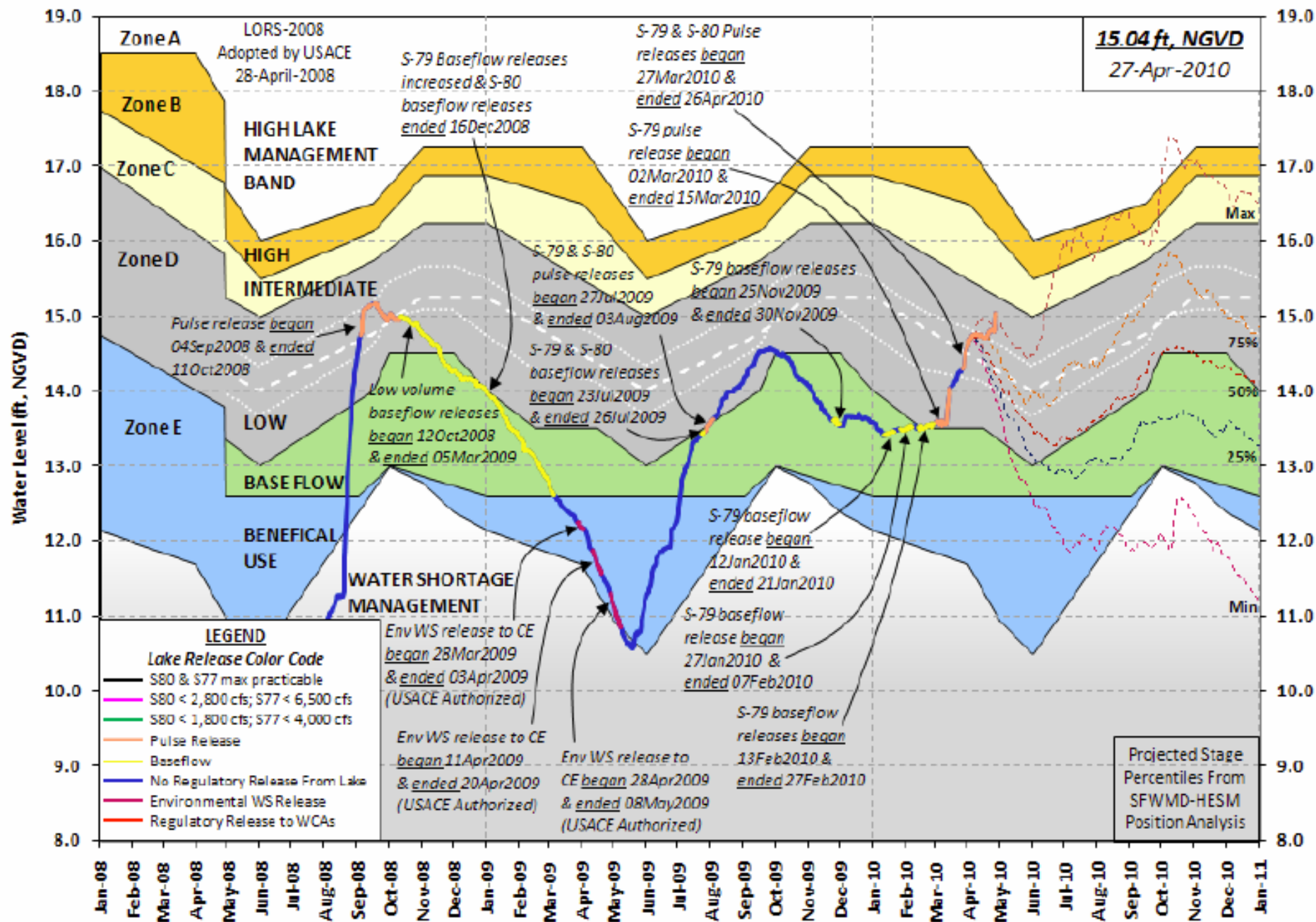
(See assumptions on the Position Analysis Results website)

Update Position Analysis (PA) for AMO Warm/El Nino Years



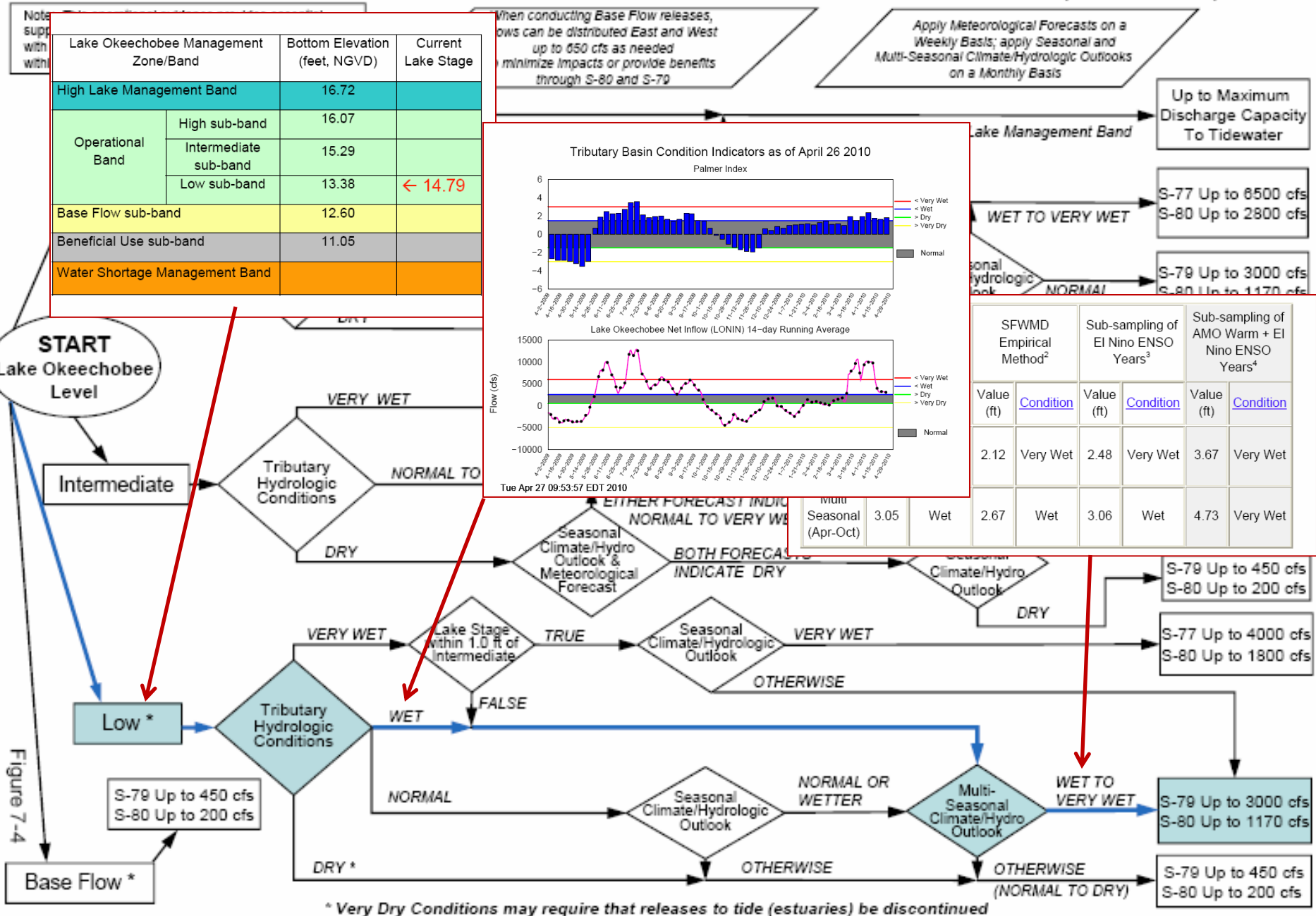
Thu Apr 8 15:35:11 2010

Lake Okeechobee Water Level History and Projected Stages



2008 LORS

Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)



2008 LORS

Part D: Establish Allowable Lake Okeechobee Releases to Tide (Estuaries)

Note: This operational guidance provides essential supplementary information to be used in conjunction with other supporting documentation including text within the Water Control Plan.

When conducting Base Flow releases, flows can be distributed East and West up to 650 cfs as needed to minimize impacts or provide benefits through S-80 and S-79

Apply Meteorological Forecasts on a Weekly Basis; apply Seasonal and Multi-Seasonal Climate/Hydrologic Outlooks on a Monthly Basis

